

Amendments to and Listing of the Claims:

Please cancel claims 2 and 10 and amend claims 1, 11, and 12 so that the claims read as follows:

1. (currently amended) A method of fabricating a probe including a cantilever, a body supporting the cantilever and a tip formed at an end of the cantilever, comprising the steps of:

forming a first mask layer on an area of a silicon substrate to be formed with the body and the tip, wherein the silicon substrate has a <110> directional crystal structure;

etching the silicon substrate in a predetermined depth using the first mask layer to form the tip;

removing the first mask and forming a second mask layer on an area of the silicon substrate except for an area to be formed with the body and the cantilever;

forming a boron-diffused layer by diffusing boron into an area to be formed with the cantilever and a predetermined area of the body using the second mask;

removing the second mask layer and forming a third mask layer on the boron-diffused layer; and

performing an anisotropic etching of the silicon substrate using the third mask layer to form the body and the cantilever.

2. (canceled)

3. (original) The method of fabricating a probe according to claim 1, wherein the first, second and third mask layers are a silicon dioxide.

4. (original) The method of fabricating a probe according to claim 1, wherein the step of etching the silicon substrate to form the tip is performed by a reactive ion etching process using SbF₆, He and O₂ gases.

5. (original) The method of fabricating a probe according to claim 4, wherein a sharpness of the tip is adjusted by varying a process condition of a constitution ratio of the gases, a power, or a pressure during the reactive ion etching process.

6. (withdrawn) The method of fabricating a probe according to claim 1, wherein the step of forming the boron-diffused layer comprises steps of ion-implanting the boron and diffusing the boron by a heat treatment.

7. (withdrawn) The method of fabricating a probe according to claim 1, wherein the step of forming the boron-diffused layer comprises a step of diffusing the boron by a heat treatment using a solid source containing the boron.

8. (withdrawn) The method of fabricating a probe according to claim 6, wherein a thickness of the boron-diffused layer is determined by a temperature during the heat treatment and a time of diffusing the boron.

9. (withdrawn) The method of fabricating a probe according to claim 7, wherein a thickness of the boron-diffused layer is determined by a temperature during the heat treatment and a time of diffusing the boron.

10. (canceled)

11. (currently amended) The method of fabricating a probe according to claim 1 [[10]], wherein the boron-diffused layer serves as an etching-stopper layer during the anisotropic etching.

12. (currently amended) The method of fabricating a probe according to claim 1 [[10]], wherein the anisotropic etching of the silicon substrate is performed by using an etchant selected from the group consisting of ethylene diamine pyrocathecol, tetramethyl ammonium hydroxide and potassium hydroxide.